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OFFICE NATIONAL DE LA PROPRIÉTÉ INDUSTRIELLE.

BREVET D'INVENTION.

XIX. — Chirurgie, médecine, hygiène, salubrité,
sécurité.

N° 403.203

4. — APPAREILS ET PROCÉDÉS DE SECOURS ET DE PRÉSERVATION.

Dispositif pour cultiver, développer, conserver, emballer et expédier des germes tels que microbes, levures, bactéries, etc., sous une forme non liquide.

LABORATOIRE DE MONTREUX (SOCIÉTÉ ANONYME) résidant en Suisse.

Demandé le 21 mai 1909.

Délivré le 18 septembre 1909. — Publié le 28 octobre 1909.

L'objet de la présente invention consiste en un dispositif pour cultiver, développer, con-
server, emballer et expédier des germes tels
que ferments, microbes, levures, bactéries, etc.,
5 sous une forme non liquide, à l'état pur de
cultures actives et vivantes, en une quantité
aussi grande que possible sous un volume
restreint.

Ce dispositif consiste, en principe, en un
10 support contenu dans un récipient approprié
et présentant une surface aérée aussi grande
que possible sous le volume le plus réduit,
ledit support étant recouvert ou imprégné
d'une substance nutritiveensemencée des
15 ferments, microbes, etc., que l'on veut cul-
tiver, développer, etc.

Le principe de l'invention pourrait, en
somme, être représenté dans sa plus simple
expression par une mèche qui serait impré-
20 gnée de substance nutritive et du germe à
cultiver, développer, conserver, etc., cette
mèche étant renfermée dans un récipient
approprié, aseptiquement hermétique.

Le dessin ci-annexé, donné à titre d'exemple,
25 montre diverses formes d'exécution de sup-
ports répondant à l'invention :

Les fig. 1 et 1' montrent, respectivement
en coupe longitudinale et transversale, un

support renfermé dans un récipient *a* et
constitué par une série de tubes *b* en matière 30
convenable quelconque telle, par exemple, que
du verre, métal, bois, craie, plâtre, papier,
textile, pâte de bois, etc., recouverts ou im-
prégnés de substance nutritiveensemencée.

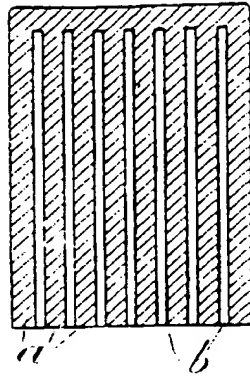
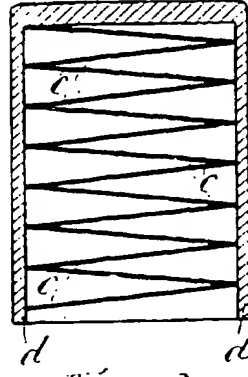
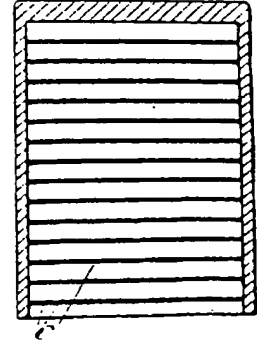
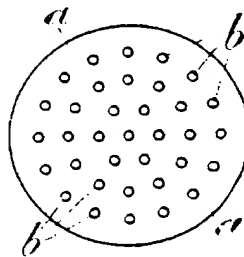
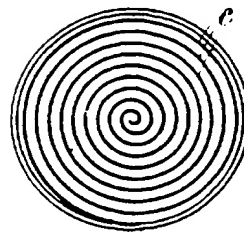
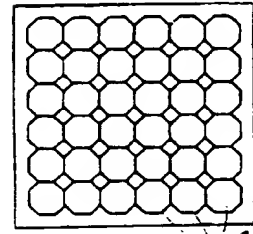
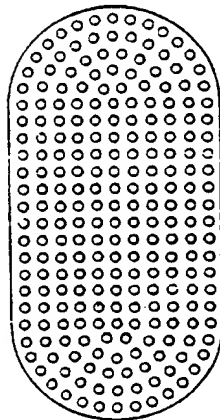
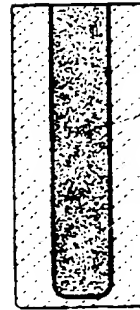
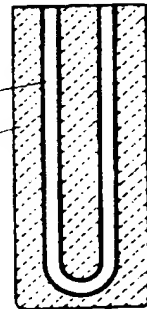
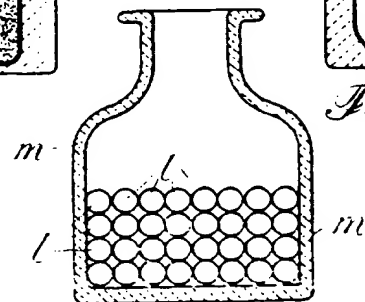
Dans la fig. 2, le support est constitué par 35
des feuilles, bandes, fils, rubans, plaques, etc.,
c en matière convenable quelconque et tendus
en zigzag sur un cadre *d*.

Dans la fig. 3, le support est constitué
comme dans l'exemple de fig. 2, mais les 40
feuilles, bandes, fils, etc., *e*, sont tendus pa-
rallèlement sur le cadre.

Le support représenté en fig. 4 consiste en
une plaque, bande, feuille, etc., *e*, de sub- 45
stance convenable quelconque, roulée en spi-
rale, avec un léger espace entre chaque spire.
Il va de soi que, dans cet exemple, on pour-
rait rouler en spirale plusieurs plaques,
bandes, feuilles, etc., un léger espace étant
50 ménagé entre les spires.

Dans l'exemple que montre la fig. 5, le
support est constitué par un corps tubulaire *f*
en forme de nid d'abeilles; ce corps, dont la
matière peut différer, peut être soit formé
d'une seule pièce, soit d'une série de tubes 55
assemblés.

Prix du fascicule : 1 franc.

*Fig. 1.**Fig. 2.**Fig. 3.**Fig. 1a.**Fig. 4.**Fig. 5.**Fig. 6.**Fig. 7.**Fig. 9.**Fig. 8.*

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FRENCH REPUBLIC

5 NATIONAL OFFICE OF INDUSTRIAL PROPERTY.

PATENT

XIX. - Surgery, medicine, hygiene, health, safety

10 4. - DEVICES AND PROCESSES FOR ASSISTANCE AND
PROTECTION

No. 403.203

15 Device for culturing, growing, preserving, packing and
despatching micro-organisms such as microbes, yeasts,
bacteria, etc., in non-liquid form.

LABORATOIRE DE MONTREUX (MONTREUX LABORATORY) (LIMITED
COMPANY) located in Switzerland.

20 Applied for on 21 May 1909.

Granted on 18 September 1909. - Published on 28 October
1909.

25

The present invention relates to a device for
culturing, growing, preserving, packing and despatching
micro-organisms such as ferments, microbes, yeasts,
bacteria, etc., in non-liquid form, in the pure state
30 of active and living cultures, in a quantity which is
as large as possible and in a limited volume.

This device consists, in principle, of a
support which is contained in an appropriate receptacle
and which exhibits an aerated surface which is as large
35 as possible in association with a volume which is as
small as possible, with the said support being covered
or impregnated with a nutrient substance which is
seeded with ferments, microbes, etc., which it is
desired to culture, grow, etc.

In its simplest terms, the principle of the invention can, in short, be represented by a wick which is impregnated with a nutrient substance and the micro-organism to be cultured, grown, preserved, etc., with this wick being enclosed in an appropriate receptacle which is aseptically hermetic.

The attached drawing, provided by way of example, shows various embodiments of the support corresponding to the invention:

Fig. 1 and 1^a show, respectively, in longitudinal and transverse section, a support which is enclosed in a receptacle *a* and consists of a series of tubes *b* made out of any suitable material such as, for example, glass, metal, wood, chalk, plaster, paper, textile, wood pulp, etc., which tubes are covered or impregnated with a seeded nutrient substance.

In Fig. 2, the support consists of sheets, strips, filaments, tapes, plates, etc., *c* made out of any suitable material and stretched in a zigzag on a frame *d*.

In Fig. 3, the constitution of the support is the same as in the example of Figure 2, but the sheets, strips, filaments, etc., *c*, are stretched parallel to the frame.

The support depicted in Fig. 4 consists of a plate, strip, sheet, etc., *e*, of any suitable substance which is rolled into a spiral, leaving a slight space between each turn. It goes without saying that it would be possible, in this example, to roll several plates, strips, sheets, etc., in spiral form, with a slight space being arranged between the turns.

In the example shown in Fig. 5, the support consists of a tubular body *f* in honeycomb form; this body, the material of which can differ, can either be formed from one single piece or from a series of assembled tubes.

[illegible] 403.203, MEDICAL AND SURGICAL DEVICES, ETC.

The support shown in Fig. 6 is formed from a block of any suitable material which is drilled with a large number of holes and this constitutes, as it were, a sponge which is impregnated with a seeded nutrient substance.

In Fig. 7, the support consists of a block g of porous material, chalk, plaster, pumice, sponge, etc., which is accommodated in a receptacle h.

The support depicted in Fig. 8 consists of a U tube i, which is made of any suitable material and which is placed in a receptacle k.

Finally, in the example shown in Fig. 9, the support consists of a number of grains, granules, peas, etc., l, which are enclosed in a bottle m.

The shape, the dimensions and the materials employed for the support and the receptacle which contains it will be able to differ, depending on the sought-after aim, the micro-organism employed, the temperature and the climate to which it is to be subjected, as well as on the quantity of micro-organism which is to be preserved and despatched.

The receptacle will be provided with a seal which enables the air to circulate freely around the support while remaining aseptic; this receptacle will be able, for example, to include a stopper having a cotton aseptic filter, or any other device which is suitable for procuring the same result; where appropriate, the receptacle will be able to be hermetic even to the air if the micro-organism to be preserved, cultured, etc., is anaerobic.

The nutrient substance will be able to be, for example, a broth, must, gelatin, agar, gum, etc.

ABSTRACT

Device for culturing, growing, preserving,
5 packing and despatching micro-organisms such as
ferments, microbes, yeast, bacteria, etc., in a non-
liquid form, in a pure state of active and living
cultures, characterized in principle by a support which
is contained in an appropriate receptacle and which
10 exhibits an aerated surface which is as large as
possible in association with a volume which is as small
as possible, with the said support being covered
totally or in part with a nutrient substance which is
impregnated with ferments, microbes, yeasts, bacteria,
15 etc., which it is desired to culture, grow, preserve,
pack and despatch, with the said receptacle being
arranged so as to enable the air to circulate freely
around the said support, while remaining aseptic, or
being hermetic to the air if the micro-organism to be
20 cultured, preserved, etc., is anaerobic.

LABORATOIRE DE MONTREUX (Montreux Laboratory)
(Limited company).

by power of attorney:

25 Hippolyte Josse.

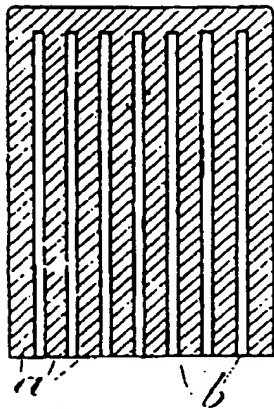


Fig. 1.

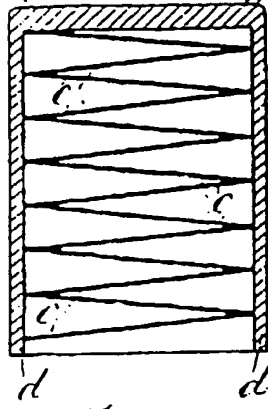


Fig. 2.

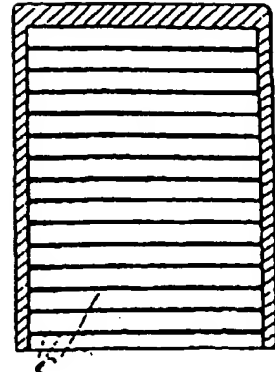


Fig. 3.

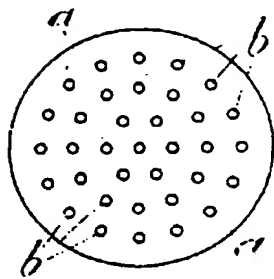


Fig. 1a.

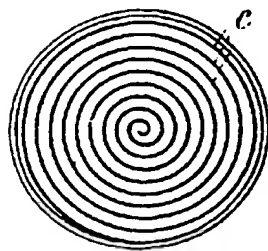


Fig. 4.

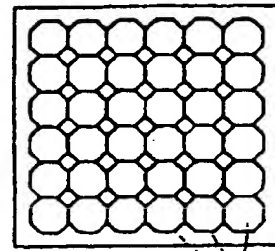


Fig. 5.

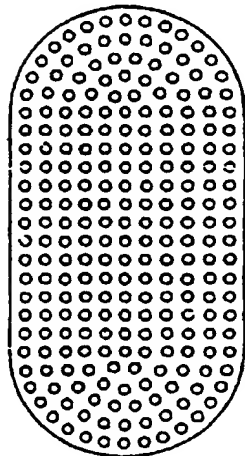


Fig. 6.



Fig. 7.

Fig. 9.

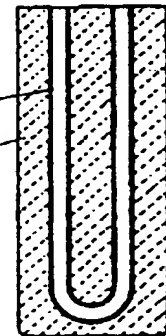


Fig. 8.

